

2025-05-20 09:45:20

FIG. 1

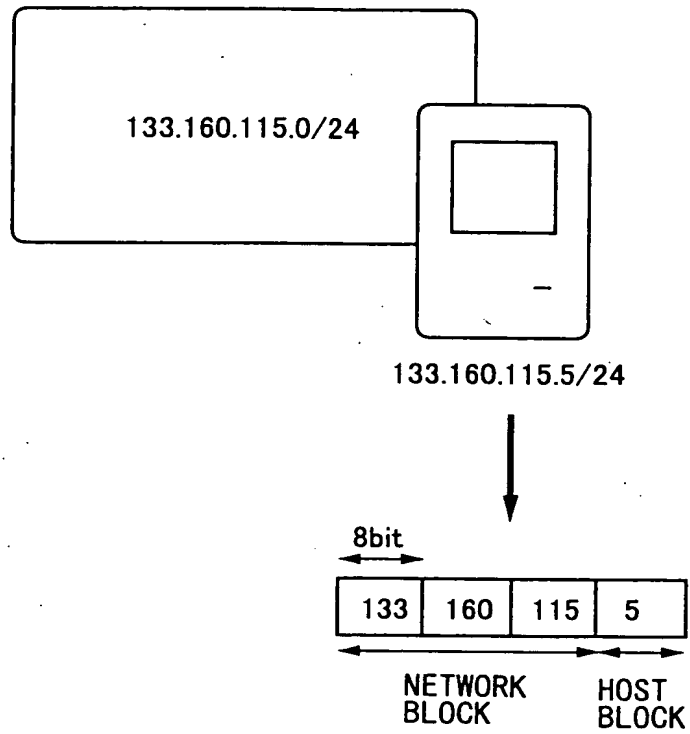


FIG. 2

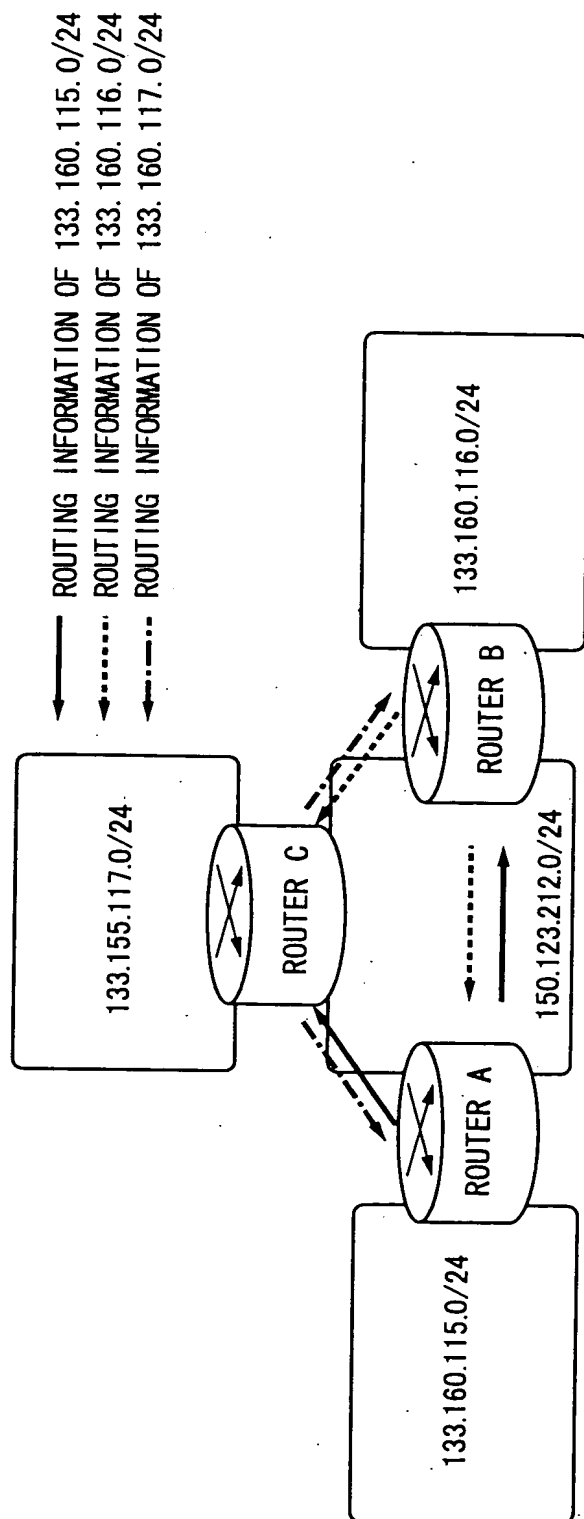


FIG.3

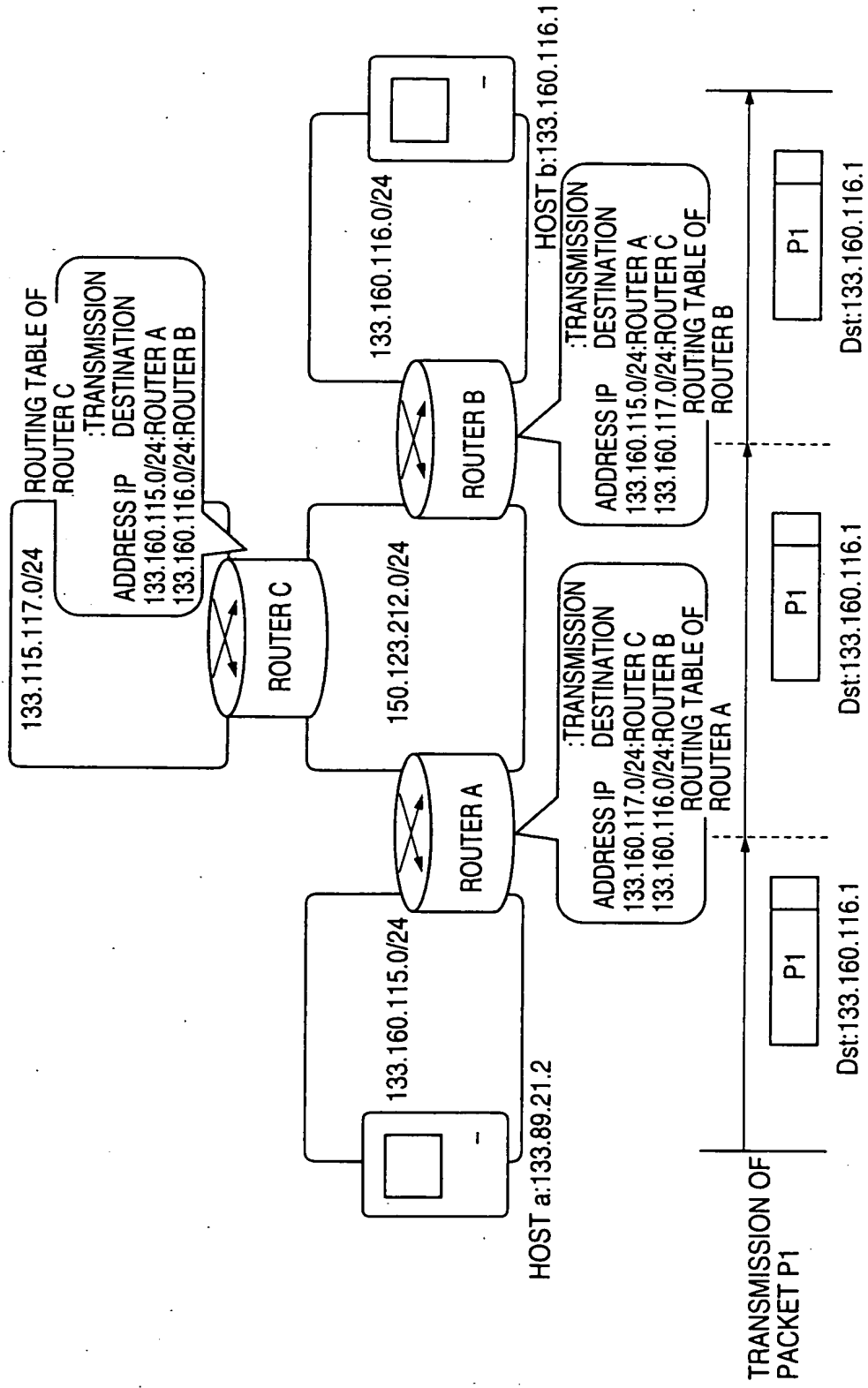
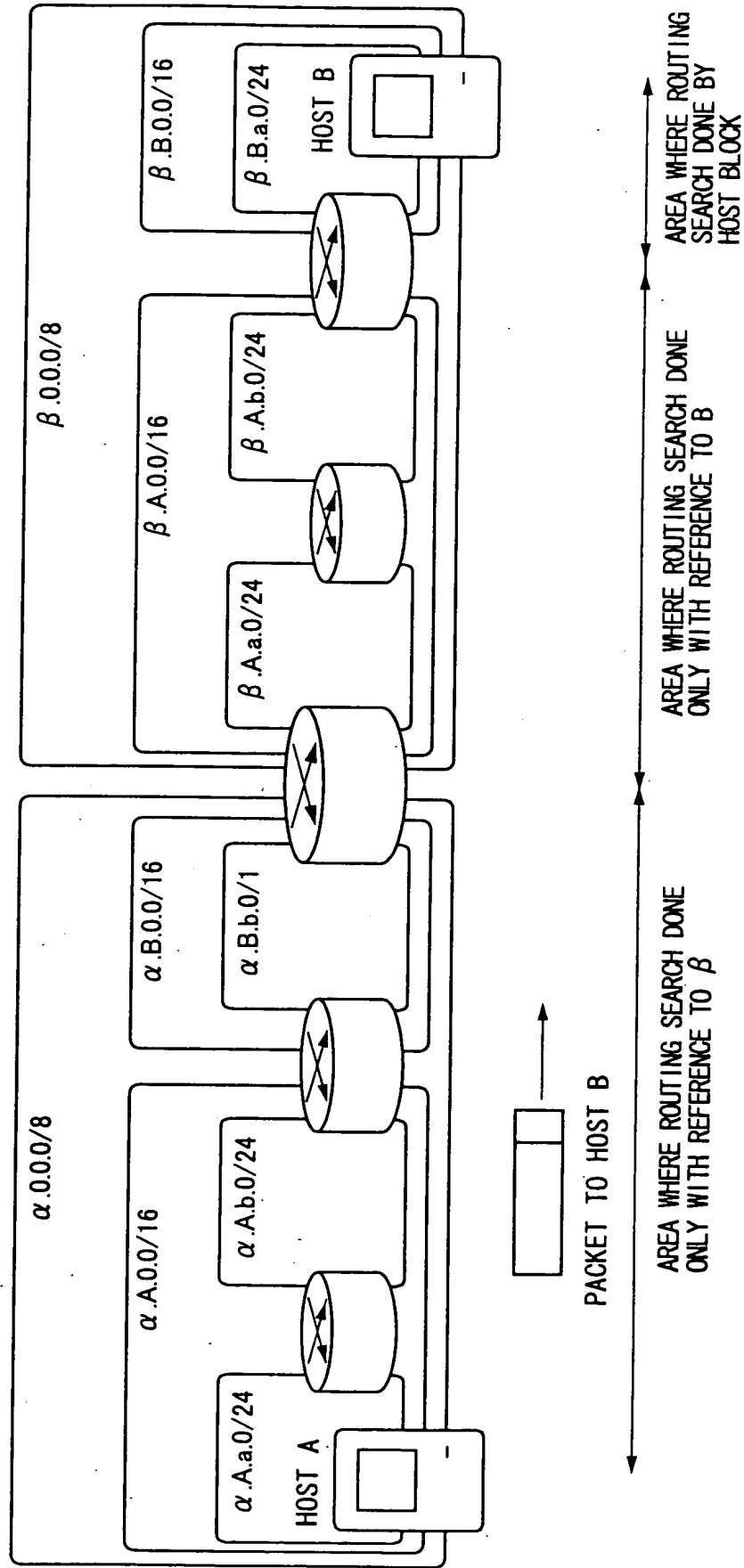


FIG. 4



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FIG.5

3	13	8	24	16	64 bits
FP	TLA	RES	NLA	SLA	Interface ID
	ID		ID	ID	

001 Format Prefix (3 bit) for Aggregatable Global Unicast Addresss

TLA ID Top-Level Aggregation Identifier

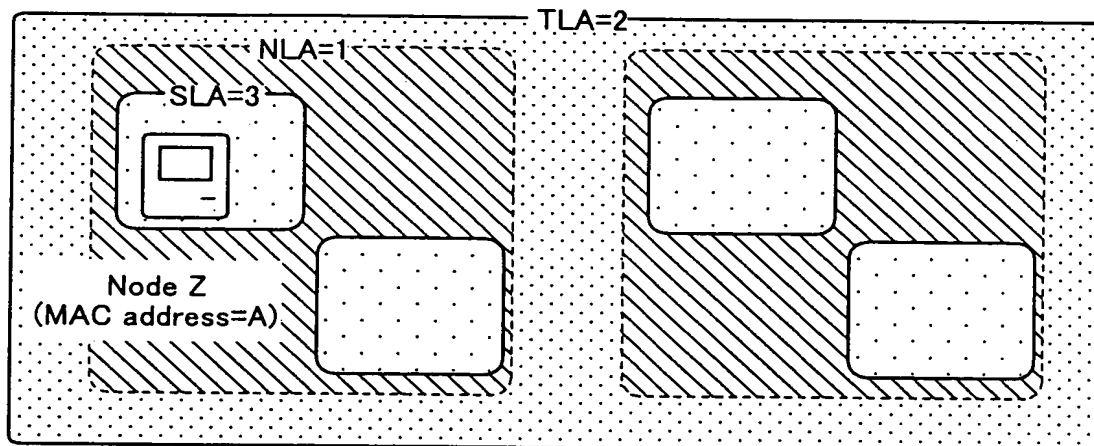
RES Reserved for future use

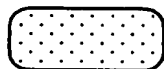
NLA ID Next-Level Aggregation Identifier


SLA ID Site-Level Aggregation Identifier

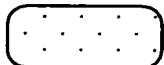
INTERFACE ID Interface Identifier

FIG.6



 HIERARCHY OF TLA LEVEL

 HIERARCHY OF NLA LEVEL

 HIERARCHY OF SLA LEVEL

3	13	8	24	16	64 bits
FP	TLA	RES	NLA	SLA	Interface ID
	ID		ID	ID	=A
	=2		=1	=3	

IP ADDRESS OF NODE 2

FIG. 7

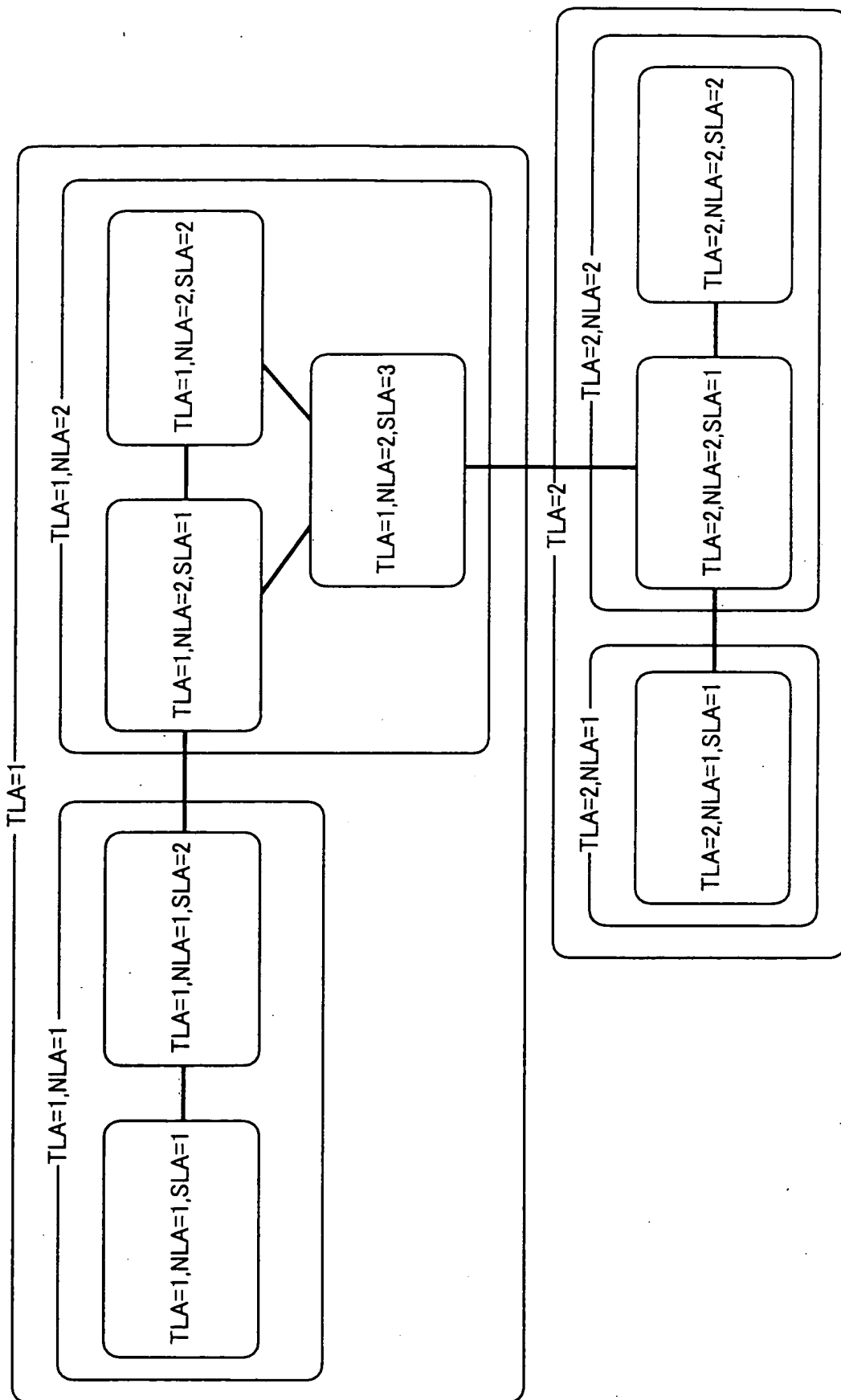
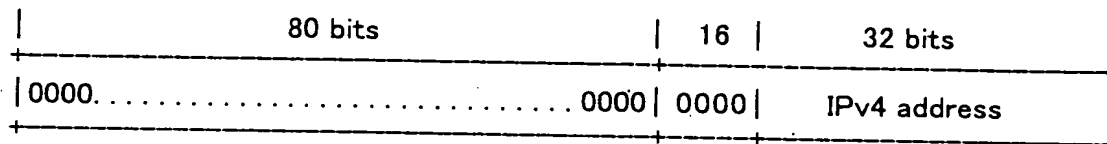


FIG.8



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FIG.9

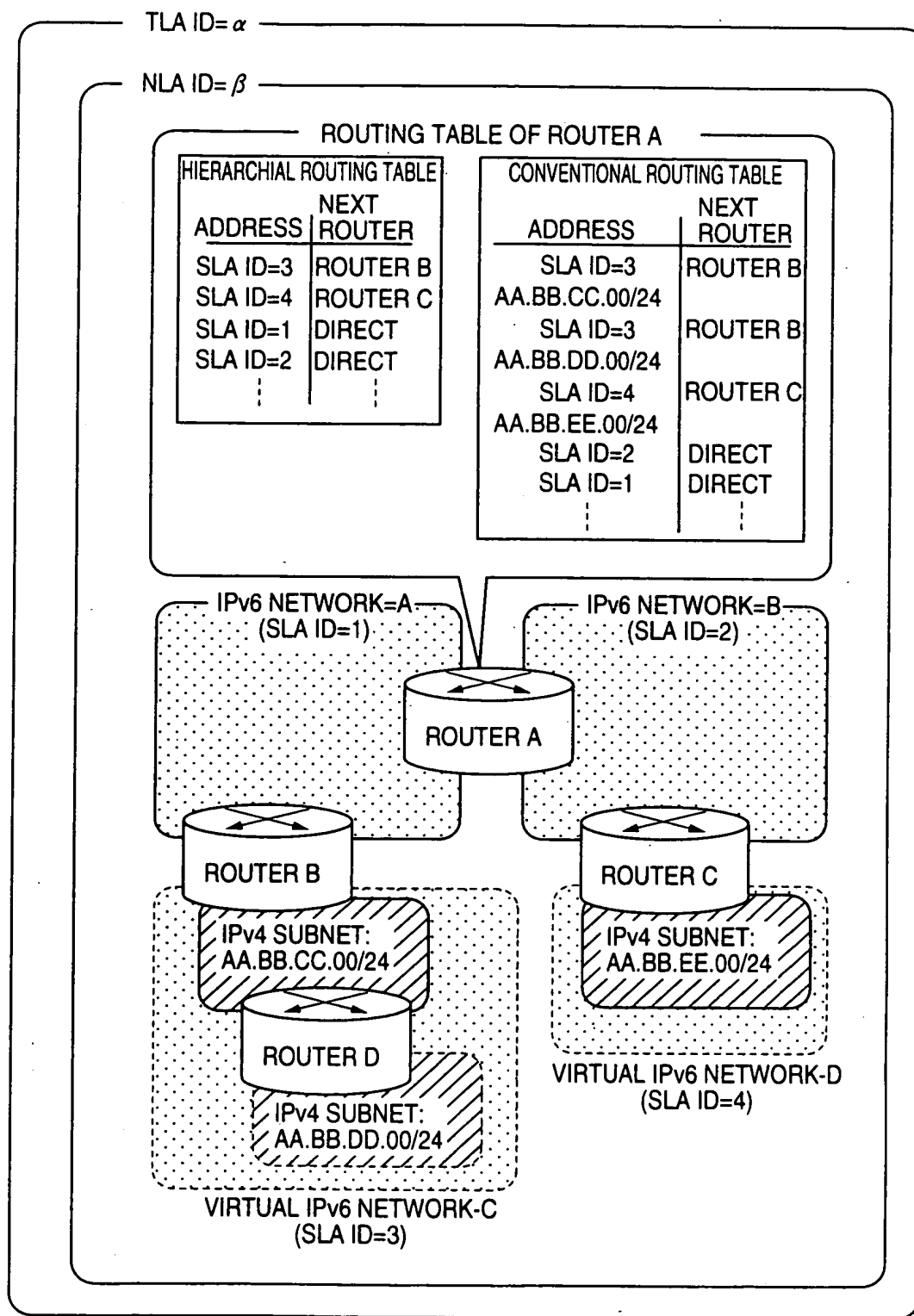


FIG.10

3	13	8	24	16	64 bits
FP	TLA ID	RES	NLA ID	SLA ID	Interface ID All 0

IPv6 NETWORK ADDRESS

3	13	8	24	16	64 bits
FP	TLA ID	RES	NLA ID	SLA ID	Interface ID 32bit=0, AA.BB.CC.0

IPv4 NETWORK ADDRESS

3	13	8	24	16	64 bits
FP	TLA ID	RES	NLA ID	SLA ID	Interface ID Layer2 address

IPv6 HOST ADDRESS

FIG.11

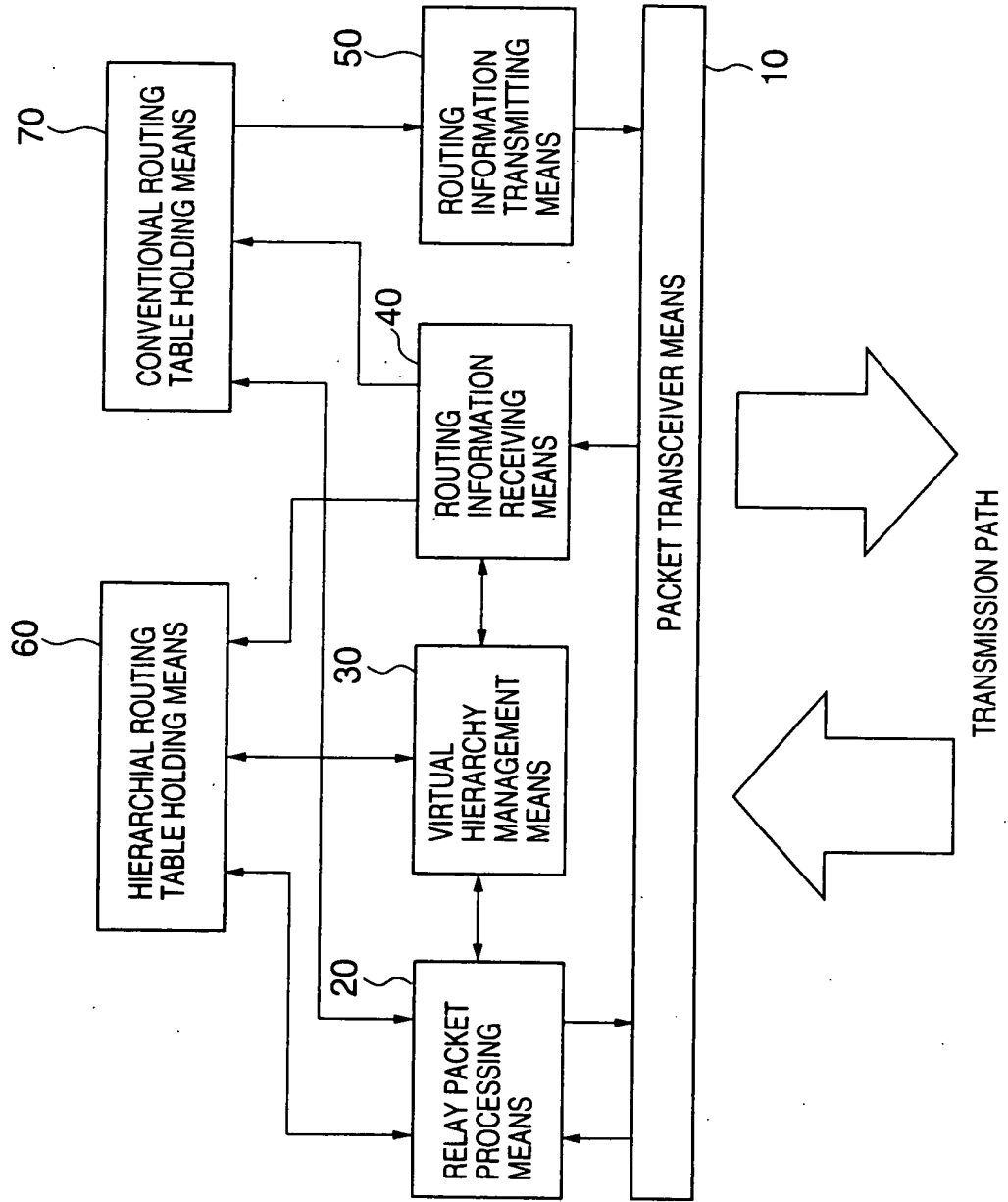
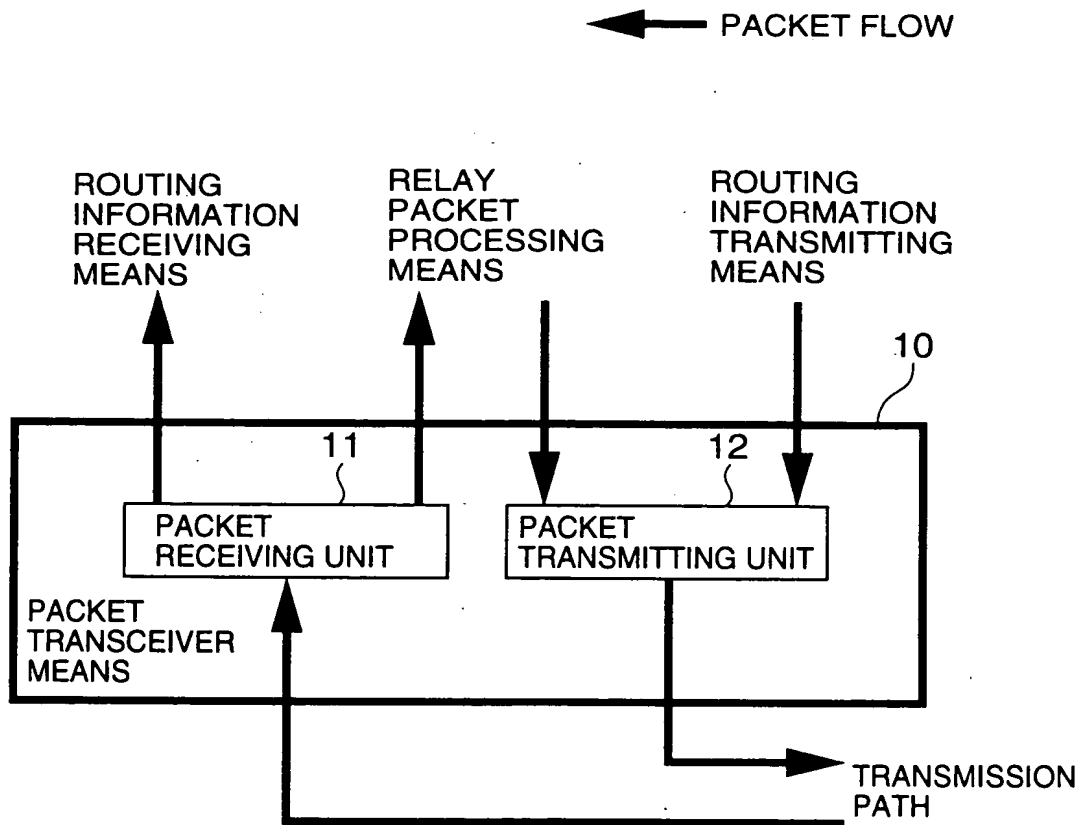


FIG.12



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FIG.13

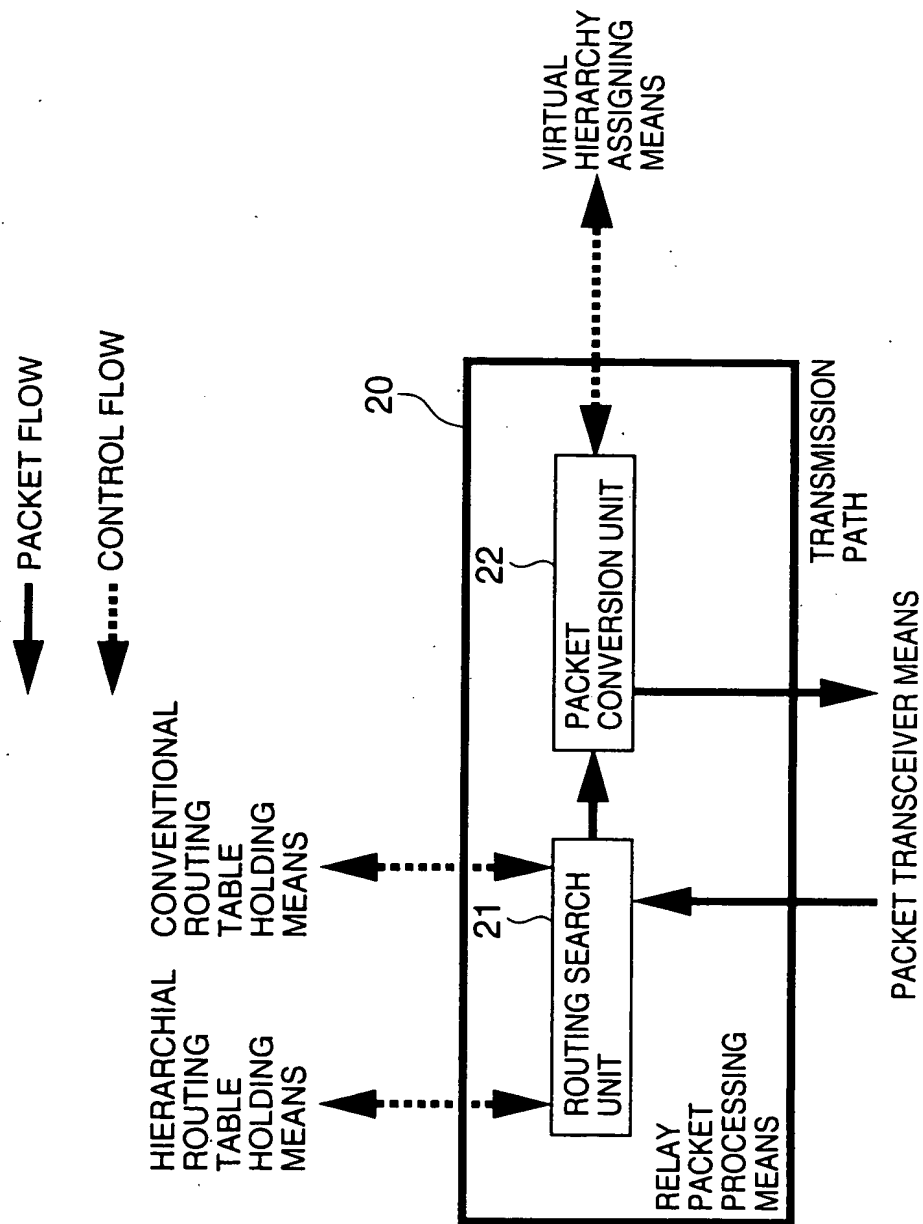


FIG.14

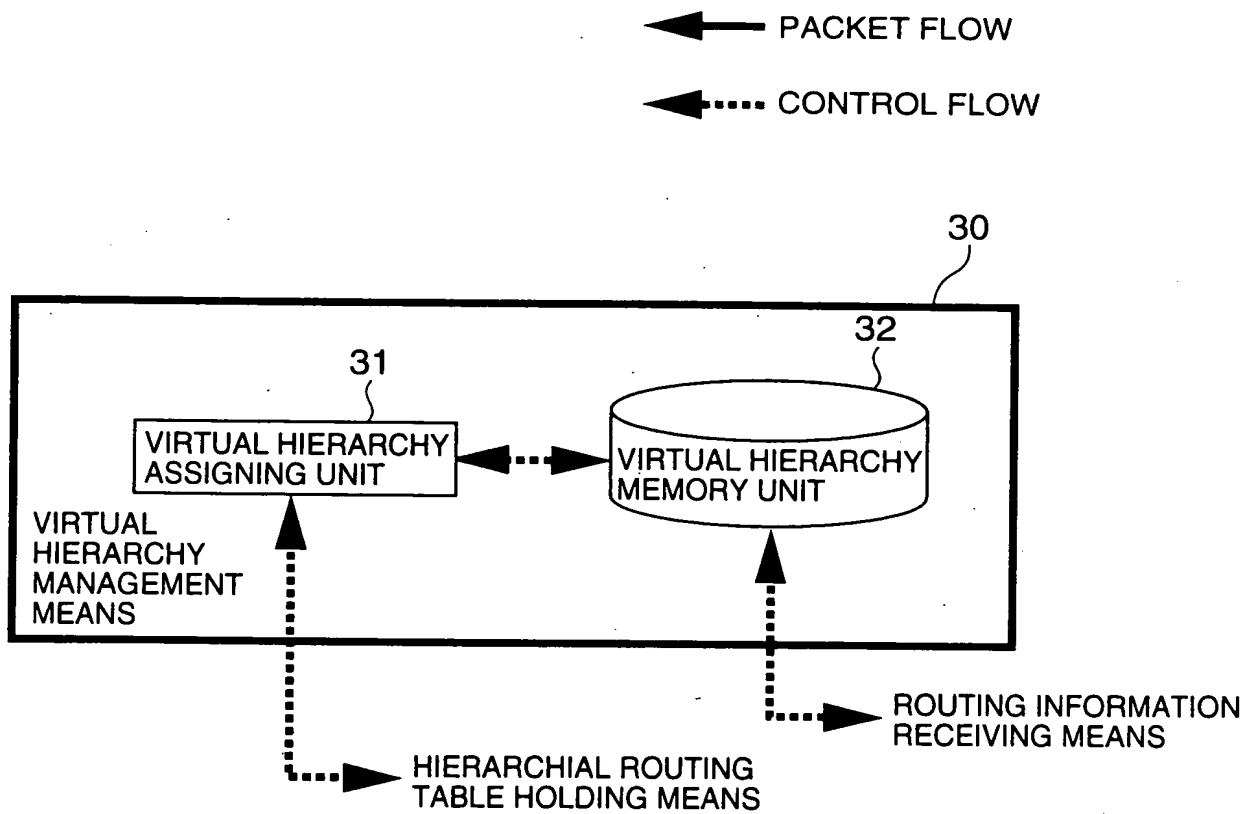


FIG.16

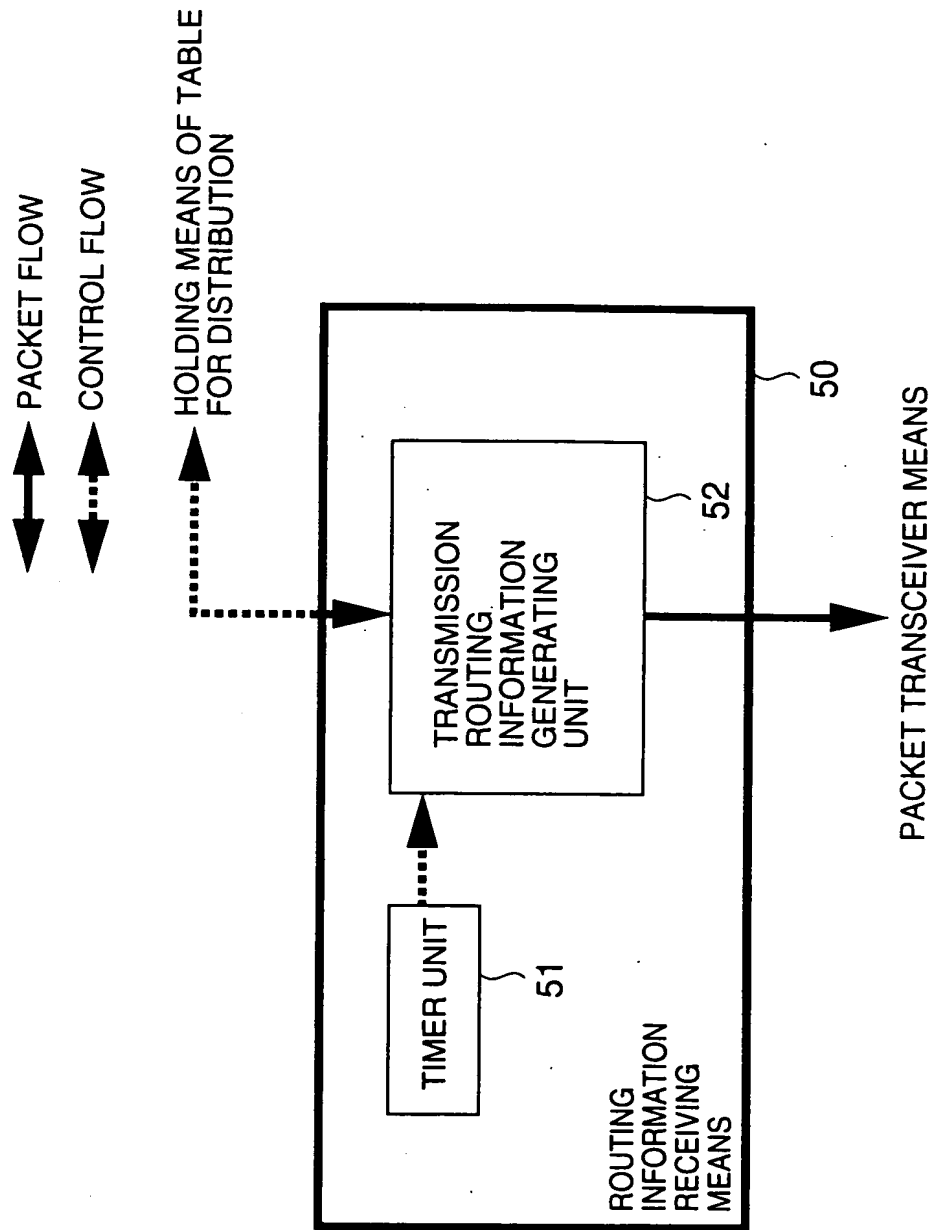
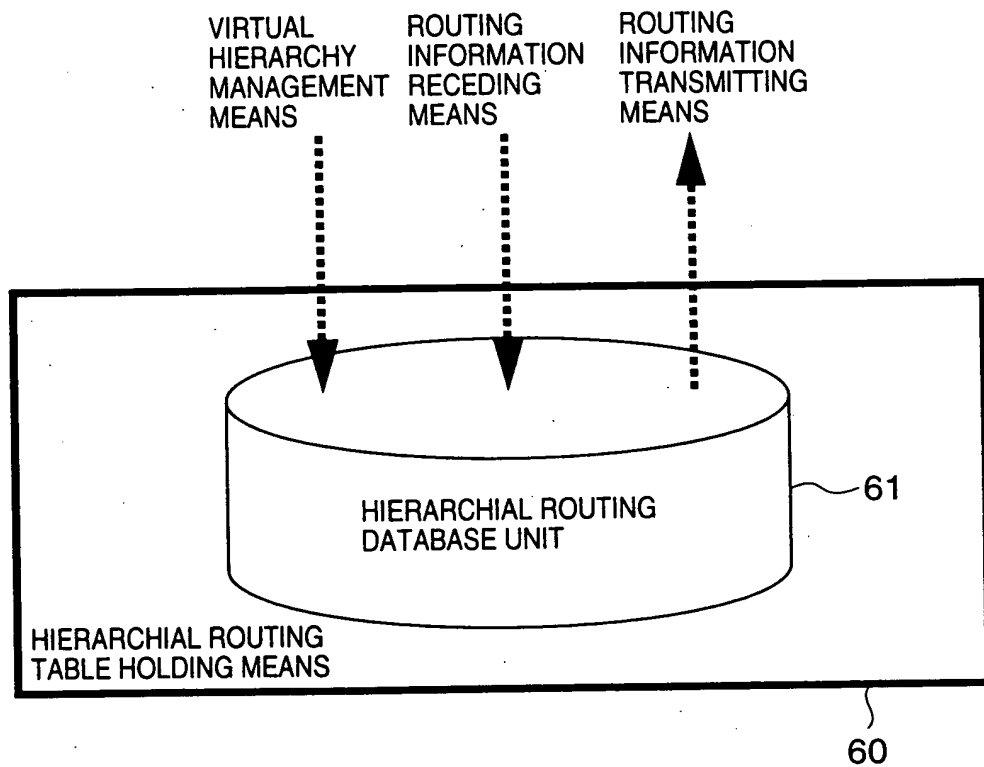


FIG.17



←---→ CONTROL FLOW

FIG. 18

FIG.19

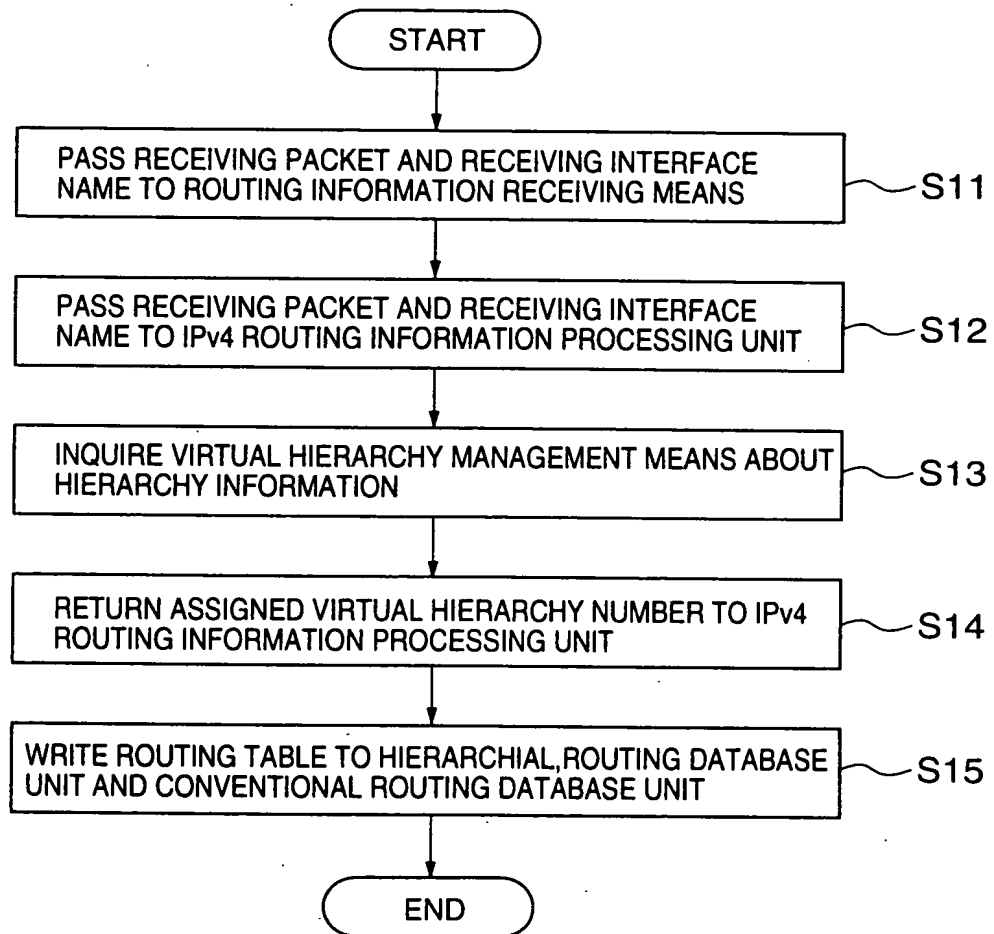
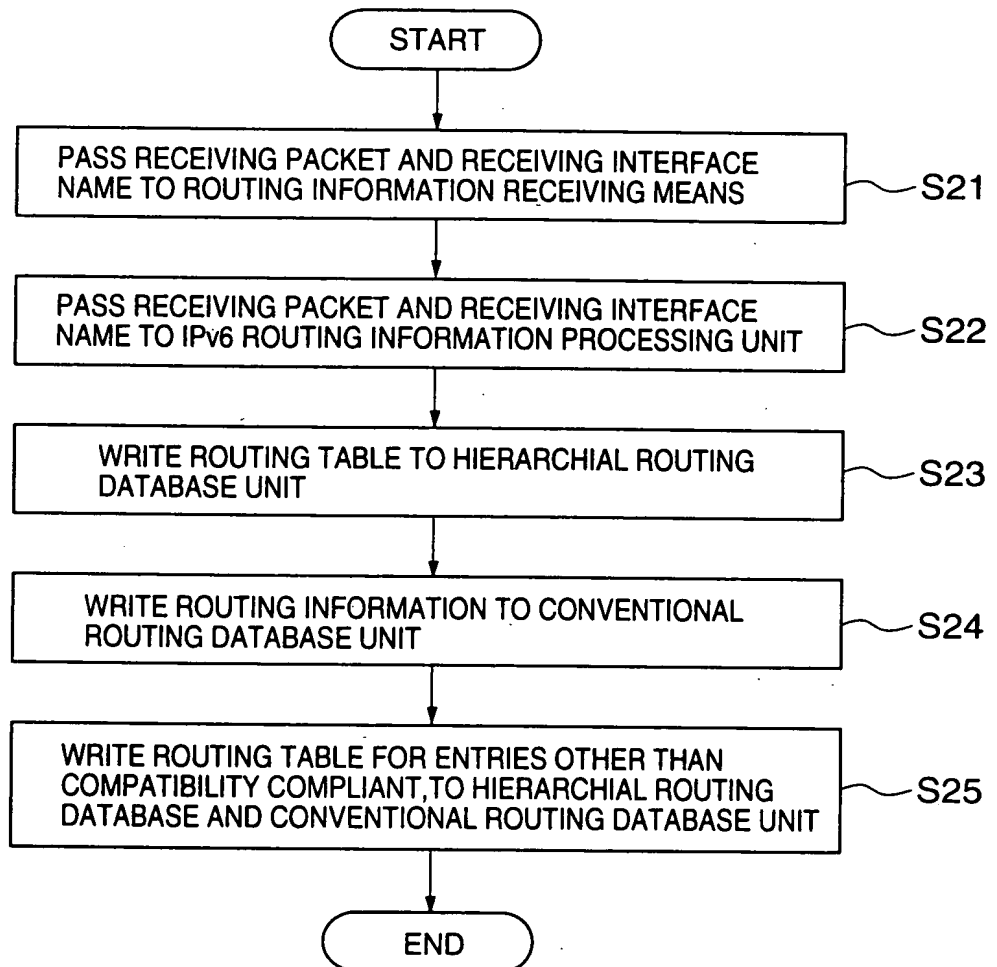


FIG.20



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FIG.21

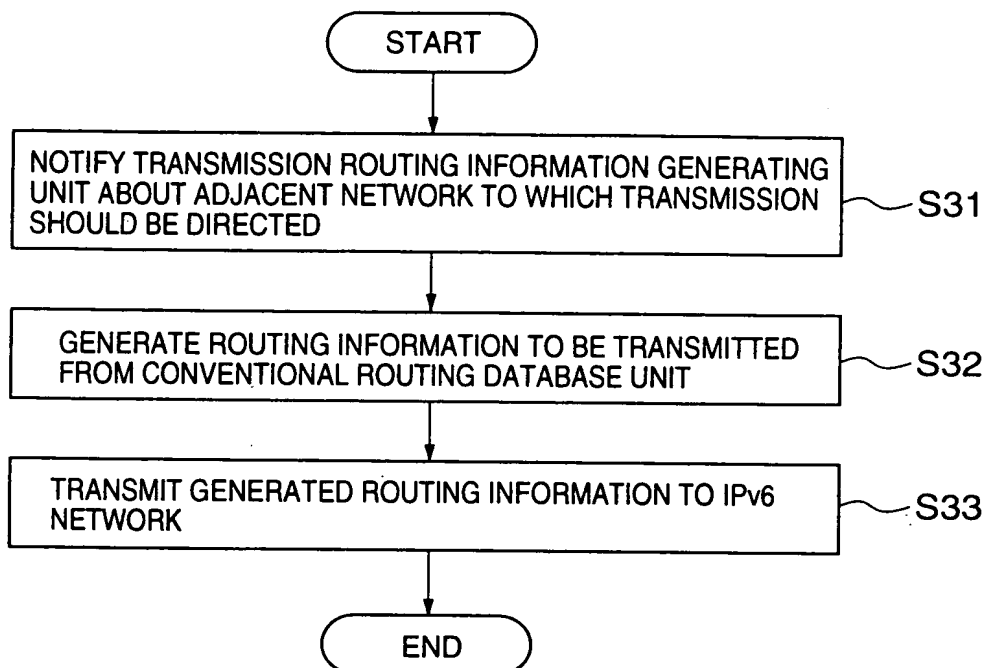


FIG.22

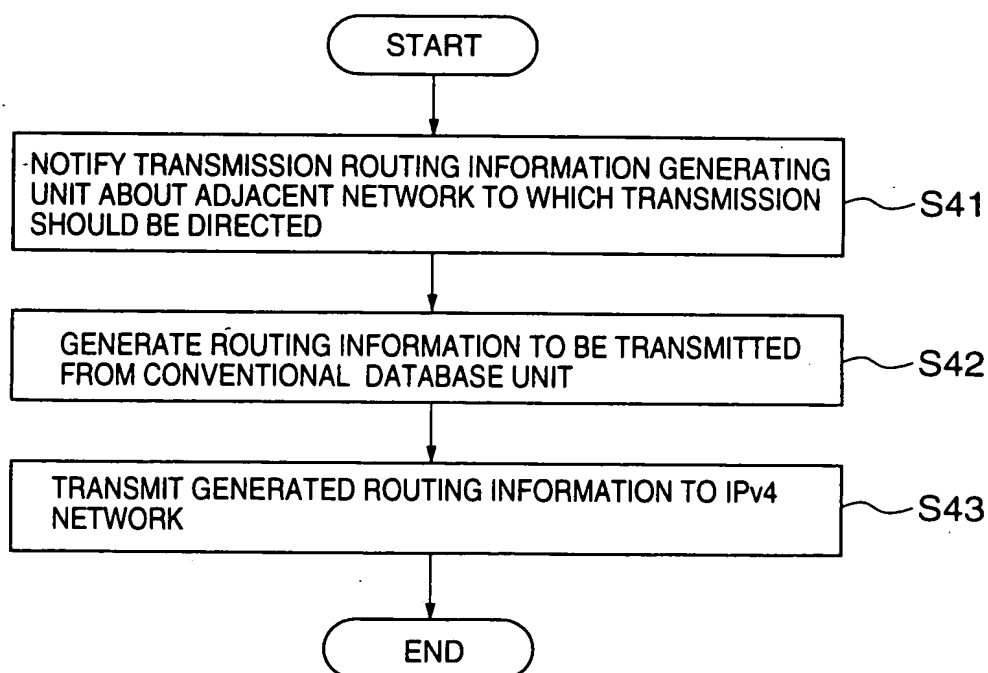


FIG.23

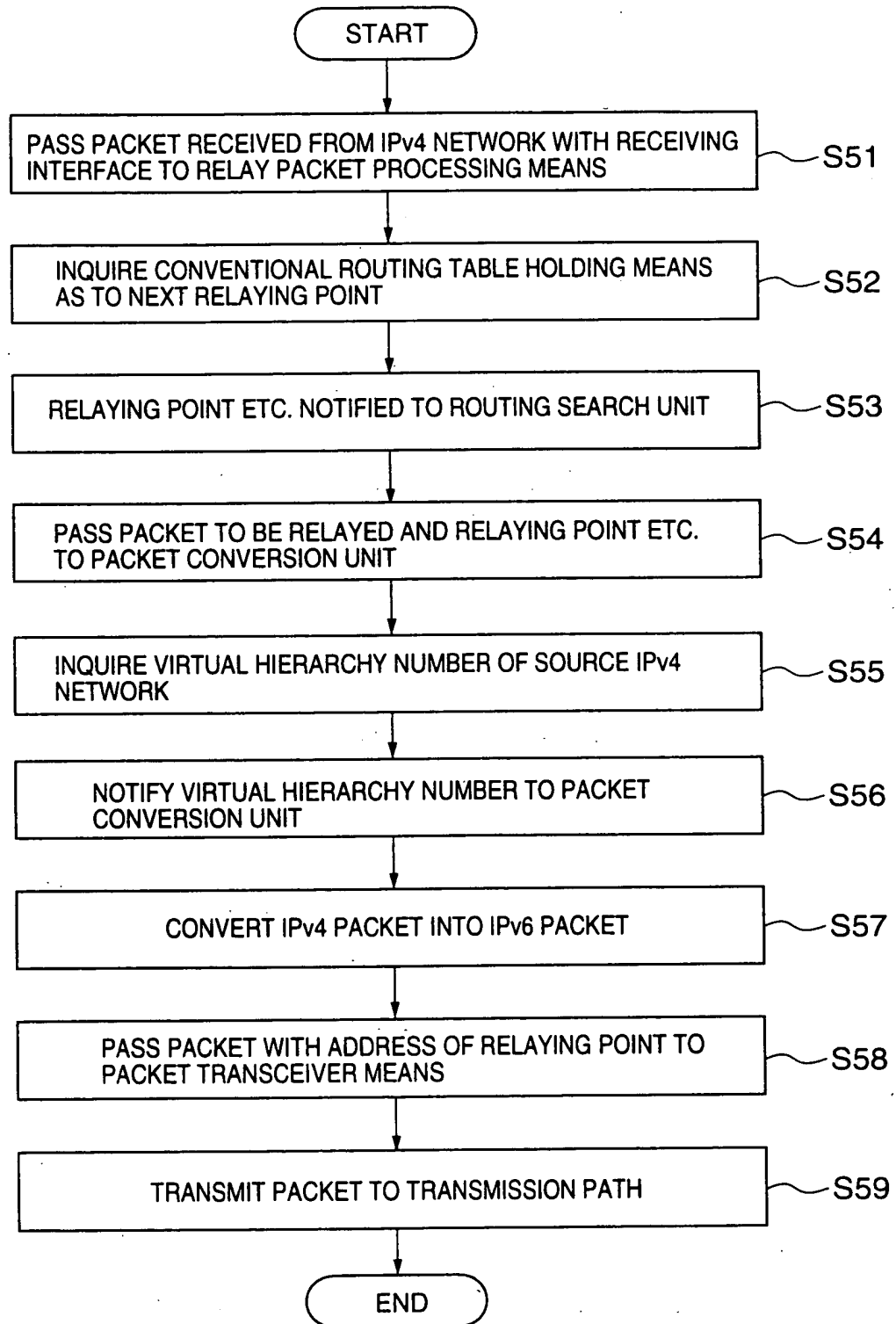


FIG.24

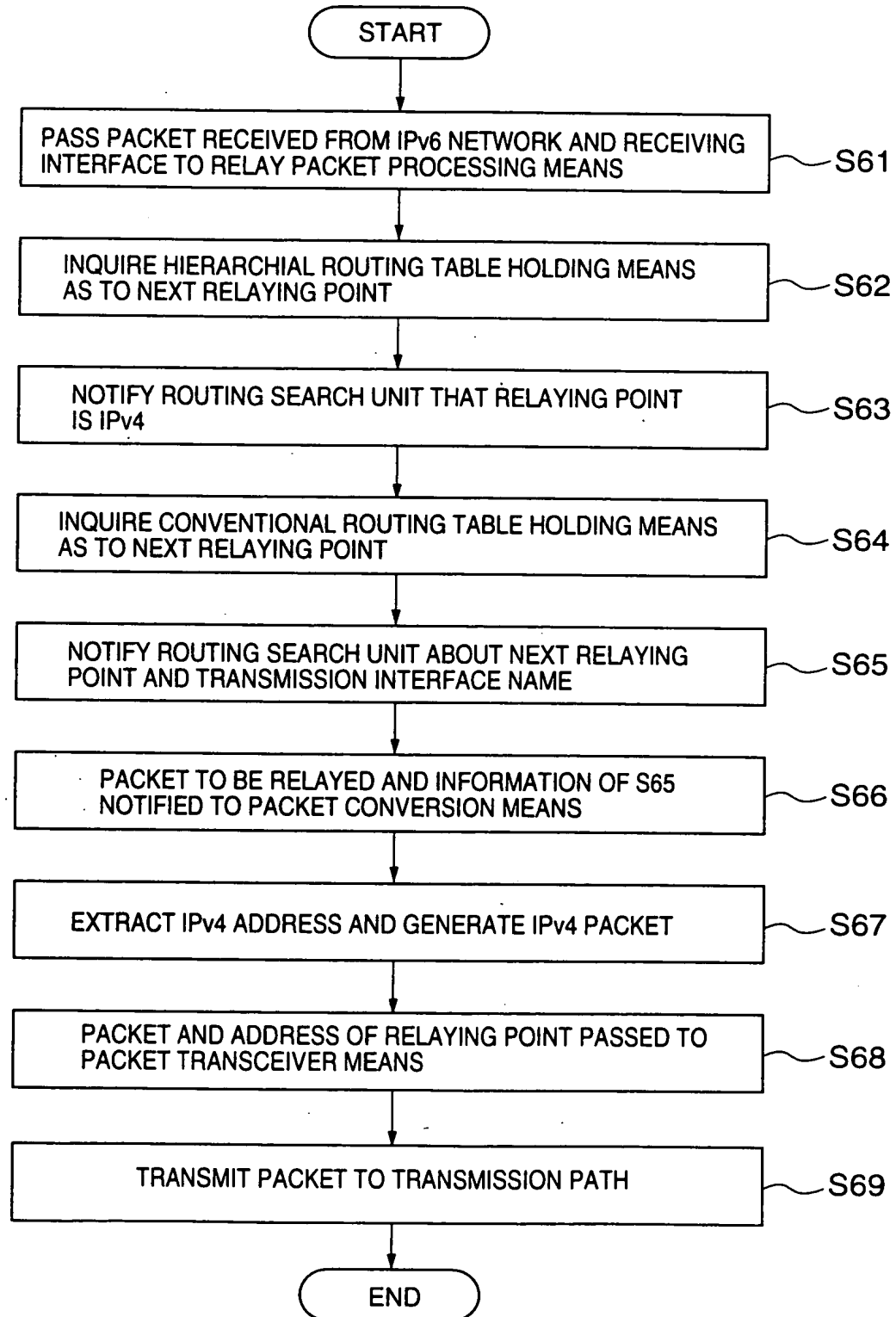


FIG.25

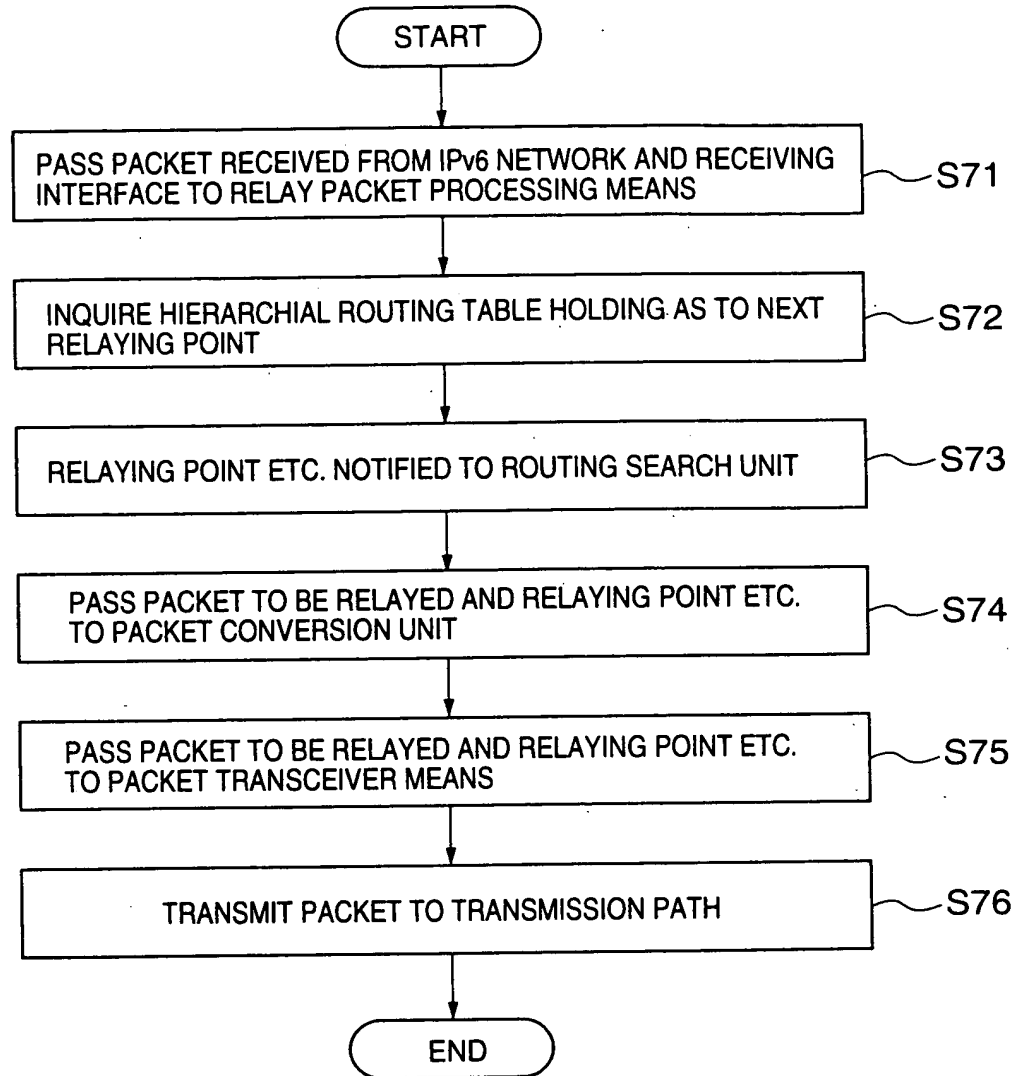


FIG.27

ROUTING TABLE OF ROUTER B

HIERARCHIAL ROUTING TABLE		CONVENTIONAL ROUTING TABLE	
ADDRESS	NEXT ROUTER	ADDRESS	NEXT ROUTER
SLA ID=3	IPv4	SLA ID=3	DIRECT(B1)
SLA ID=1	DIRECT(B2)	AA.BB.CC.00/24	DIRECT A(B1)
		SLA ID=3	DIRECT A(B1)
		AA.BB.DD.00/24	DIRECT (B2)
		SLA ID=1	DIRECT (B2)

TRANSMISSION INTERFACE NAME IN PARENTHESIS

FIG.28

ROUTING TABLE OF ROUTER C

TABLE GENERATED BASED ON ROUTING INFORMATION FROM ROUTER B

HIERARCHIAL ROUTING TABLE		CONVENTIONAL ROUTING TABLE	
ADDRESS	NEXT ROUTER	ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER B(C1)	SLA ID=3	ROUTER B(C1)
SLA ID=1	DIRECT(C1)	AA.BB.CC.00/24	ROUTER B(C1)
SLA ID=2	DIRECT(C2)	SLA ID=3	ROUTER B(C1)
		AA.BB.DD.00/24	ROUTER B(C1)
		SLA ID=2	DIRECT A(C2)
		SLA ID=1	DIRECT (C1)

TRANSMISSION INTERFACE NAME IN PARENTHESIS

FIG.29

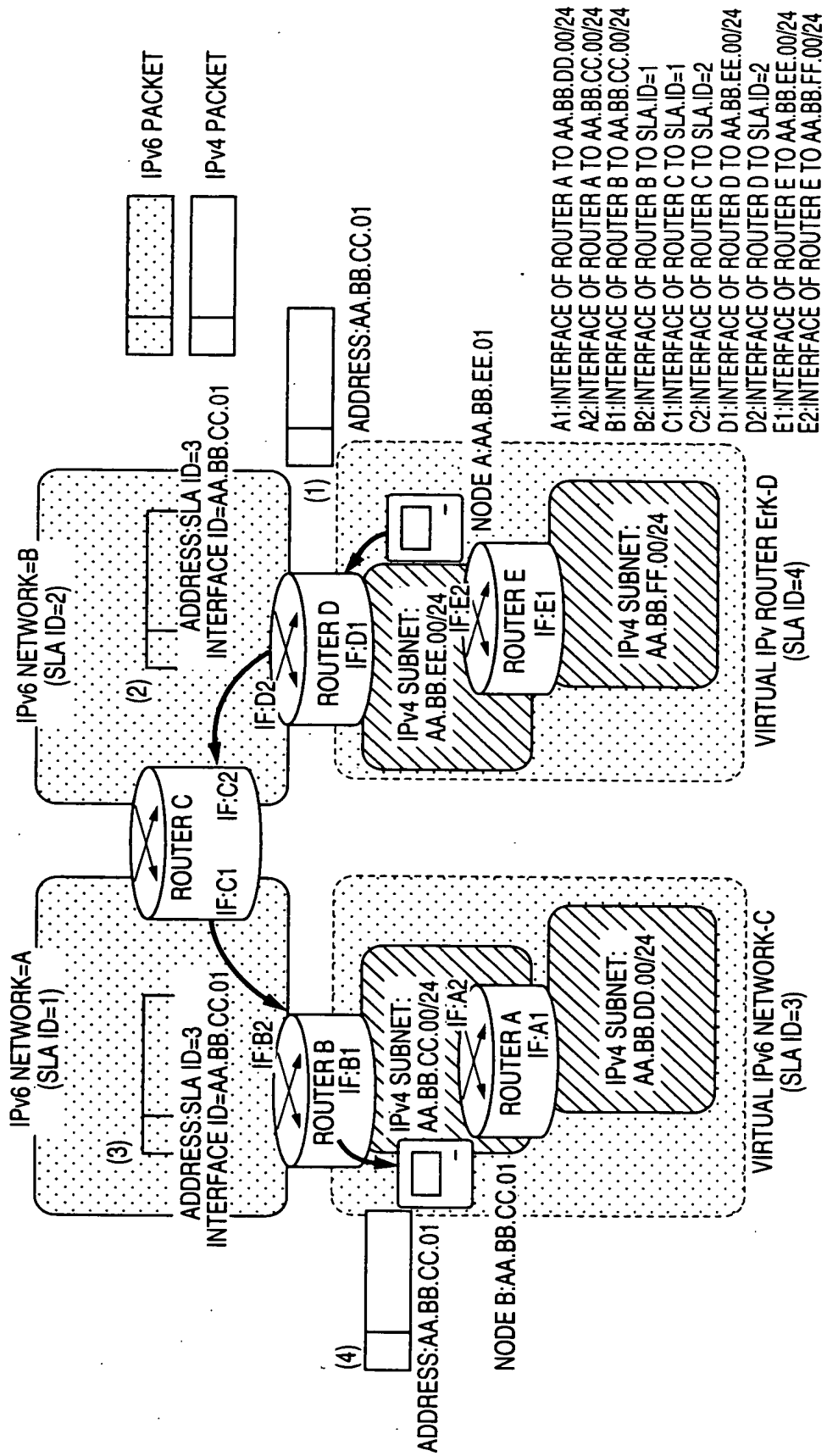
ROUTING TABLE OF ROUTER D

TABLE GENERATED BASED ON ROUTING INFORMATION FROM ROUTER C

HIERARCHIAL ROUTING TABLE		CONVENTIONAL ROUTING TABLE	
ADDRESS	NEXT ROUTER	ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER C(D2)	SLA ID=3	ROUTER C(D2)
SLA ID=1	DIRECT C(D2)	AA.BB.CC.00/24	
SLA ID=2	DIRECT(D2)	SLA ID=3	ROUTER C(D2)
SLA ID=4	IPv4(D1)	AA.BB.DD.00/24	
		SLA ID=1	ROUTER C(D2)
		SLA ID=2	DIRECT(D2)
		SLA ID=4	DIRECT(D1)
		AA.BB.EE.00/24	

TRANSMISSION INTERFACE NAME IN PARENTHESIS


FIG.30



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FIG.31

ROUTING TABLE OF ROUTER D

 MATCHED ENTRY IN ROUTING SEARCH

HIERARCHIAL ROUTING TABLE		CONVENTIONAL ROUTING TABLE	
ADDRESS	NEXT ROUTER	ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER C(D2)	SLA ID=3	ROUTER C(D2)
SLA ID=1	ROUTER C(D2)	AA.BB.CC.00/24	
SLA ID=2	DIRECT(D2)	SLA ID=3	ROUTER C(D2)
SLA ID=4	IPv4(D1)	AA.BB.DD.00/24	
		SLA ID=1	ROUTER C(D2)
		SLA ID=2	DIRECT(D2)
		SLA ID=4	DIRECT(D1)
		AA.BB.EE.00/24	

TRANSMISSION INTERFACE NAME IN PARENTHESIS

FIG.32

ROUTING TABLE OF ROUTER C

HIERARCHIAL ROUTING TABLE		CONVENTIONAL ROUTING TABLE	
ADDRESS	NEXT ROUTER	ADDRESS	NEXT ROUTER
SLA ID=3	ROUTER B(C1)	SLA ID=3	ROUTER B(C1)
SLA ID=1	DIRECT(C1)	AA.BB.CC.00/24	
SLA ID=2	DIRECT(C2)	SLA ID=3	ROUTER B(C1)
		AA.BB.DD.00/24	
		SLA ID=2	DIRECT(C2)
		SLA ID=1	DIRECT(C1)

TRANSMISSION INTERFACE NAME IN PARENTHESIS

FIG.33

ROUTING TABLE OF ROUTER B

